

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

6.11.036 1. (Currently Amended) A microorganism cotransformed with a plasmid vector containing a gene expressing HIV nucleocapsid protein, and a plasmid vector containing HIV psi (ψ) sequence and a reporter gene located downstream of the HIV psi (ψ) sequence, wherein reporter gene expression is downregulated by the specific binding interaction of the psi sequence with the nucleocapsid protein.

2. (Original) The microorganism of claim 1 wherein the plasmid vector containing a gene expressing HIV nucleocapsid protein is pJCI.

3. (Previously Presented) The microorganism of claim 1 wherein the HIV psi (ψ) sequence is selected from the group consisting of SL1234 (SEQ ID NO: 2), SL234 (SEQ ID NO: 5), SL23 (SEQ ID NO: 4), and SL12 (SEQ ID NO: 3).

4-6. Canceled.

7. (Previously Presented) The microorganism of claim 22 wherein the β -galactosidase reporter gene is SEQ ID NO: 1.

8. (Previously Presented) The microorganism of claim 7 wherein the plasmid vector containing HIV psi(ψ) sequence and β -galactosidase reporter gene is selected from the group consisting of

pNHIPsi(SL1234), pNHIPsi(SL234), pNHIPsi(SL23), pNHIPsi(SL12), and pNH1Psi(SL34).

9-11. Canceled

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A microorganism comprising a
recombinant
12. (Currently Amended) *E. coli* JM109 (KCCM-10194) cotransformed with a vector pJC1 expressing HIV nucleocapsid protein, and a vector pNHIPsi(SL1234) containing HIV psi(ψ) sequence and β -galactosidase reporter gene (SEQ ID NO : 1) located downstream of the HIV psi(ψ) sequence, wherein β -galactosidase expression is downregulated by the specific binding interaction of the psi sequence with the nucleocapsid protein.

13. (Currently Amended) A microorganism cotransformed with ^{the} vector pJC1 expressing ^{the} HIV nucleocapsid protein, and a vector pNHIPsi(SL234) containing HIV psi (ψ) sequence and β -galactosidase reporter gene (SEQ ID NO : 1) located downstream of the HIV psi(ψ) sequence, wherein β -galactosidase expression is downregulated by the specific binding interaction of the psi sequence with the nucleocapsid protein.

14. (Currently Amended) A microorganism cotransformed with ^{the} vector pJC1 expressing ^{the} HIV nucleocapsid protein, and a vector pNHIPsi(SL23) containing ^{the} HIV psi (ψ) sequence and β -galactosidase reporter gene (SEQ ID NO : 1) located downstream of the HIV psi(ψ) sequence, wherein β -galactosidase expression is downregulated by the specific binding interaction of the psi sequence with the nucleocapsid protein.

15. (Currently Amended) A microorganism cotransformed with ^{the} a vector pJC1 expressing HIV ^{the} nucleocapsid protein, and a vector pNHIPsi(SL12) containing HIV psi (ψ) sequence and β -galactosidase reporter gene (SEQ ID NO : 1) located downstream of the HIV psi(ψ) sequence, wherein β -galactosidase expression is downregulated by the specific binding interaction of the psi sequence with the nucleocapsid protein.

16. (Currently Amended) A microorganism transformed with a vector pNHIPsi(SL1234) containing ^{the} HIV psi (ψ) gene and β -galactosidase reporter sequence (SEQ ID NO : 1) located downstream of the HIV psi(ψ) sequence, wherein β -galactosidase expression is downregulated by the specific binding interaction of the psi sequence with the nucleocapsid protein.

17. (Currently Amended) A microorganism wherein both a plasmid vector containing a gene coding for ^{the} HIV nucleocapsid protein and a plasmid vector containing ^{the} HIV psi (ψ) sequence and β -galactosidase reporter gene (SEQ ID NO : 1) located downstream of the HIV psi(ψ) sequence are integrated into a chromosome, wherein β -galactosidase expression is downregulated by the specific binding interaction of the psi sequence with the nucleocapsid protein.

18. (Currently Amended) A method ^{of} ^{for} screening HIV packaging inhibitors which comprises the steps of:

- (i) culturing the cotransformed microorganism of claim 1;

(ii) treating the said cotransformed microorganism with putative compounds or compositions of HIV inhibitors; and,

(iii) measuring the degree of change in β -galactosidase reporter gene expression in the culture, wherein an increase in reporter gene expression in the presence of the compound or composition compared to reporter gene expression in the absence of the compound or composition indicates the compound or composition inhibits the specific binding interaction between the HIV nucleocapsid protein and the psi sequence.

19. (Previously Presented) The method of claim 18 wherein the cotransformed microorganism is *E. coli* JM109 (KCCM-10194).

20-21. (Canceled)

22. (Previously Presented) The microorganism of claim 1, wherein the reporter gene is β -galactosidase.

23. (New) A method for screening HIV packaging inhibitors which comprises the steps of:

- (i) culturing the cotransformed microorganism of claim 1;
- (ii) treating the said cotransformed microorganism with putative compounds or compositions of HIV inhibitors; and,
- (iii) measuring the degree of change in reporter gene expression in the culture.

→ no measure

24. (New) A microorganism cotransformed with only two plasmid vectors, the first vector containing a gene expressing HIV nucleocapsid protein, and the second vector containing a HIV psi (ψ) sequence and a reporter gene located downstream of the HIV psi (ψ) sequence.